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(A) SOME PROBLEMS OF EARTHQUAKES AND THEIR PREVENTION (B) A DISCUSSION OF THE PROBLEMS OF VOLCANIC ACTIVITY

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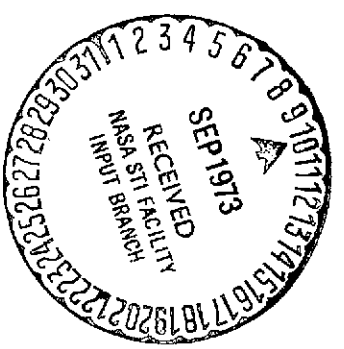

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(A) SOME PROBLEMS OF EARTHQUAKES AND THEIR PREVENTION
(B) A DISCUSSION OF THE PROBLEMS OF VOLCANIC ACTIVITY

M. S. István

ABSTRACT. In subterranean caves containing petroleum and natural gas, the chemical effect of porphyrin catalases or catalases of other heavy metals produces free molecules of oxygen and peroxide, and in addition quinones and polymerisable and polycondensable products: derivates of tar, natural asphalt and natural paraffin. The free molecules of oxygen and peroxide are of great importance in the case when a qualitative and quantitative discrepancy in the electric charge of the walls of the caves filled with petroleum or gas allows the generation of an electric spark. The subterranean explosion of petroleum or natural gas provoked by a spark may cause earthquakes, landslips, and where the tectonic structure of the Earth's crust makes it possible, also volcanic activity.

(A) Scientific arguments and daily geophysical observations for the basis of the following supposition: variable electrical charges exist in the Earth's crust which are due to various factors. /1*

It may be assumed that giant blocks exist beneath the Earth's crust which have a positive or negative electrical charge. Between these blocks charged with electricity having different signs, there is a relatively stable relationship which has a position at rest according to Coulomb's law.

$$F = k \frac{q \cdot Q}{r^2} = \frac{1}{4\pi \varepsilon_0 \varepsilon_r} \frac{q \cdot Q}{r^2}$$

The force due to a point charge q and acting on another point charge Q is:

- directed along the straight line which joins these charges,
- repulsive if the charges have the same sign, attractive in the opposite case.

*Numbers in the right margin indicate pagination in the foreign text.

The modulas is proportional to the activating charge and to that which undergoes the action; it is inversely proportional to the inverse of the square of the distance of the two charges.

The stable and quiet state will persist until the moment when the number of plus and minus electrical charges of adjacent blocks are in equilibrium, in which case there will be neither any earthquakes nor volcanic activity.

In our century, when the amount of negative electricity (the electricity of rubber and other polymerized macromolecular strucutres) in the Earth's crust is increasing due to friction (caused by very diverse causes: increased traffic, roads covered with asphalt or other synthetic material, increases in the wearing of clothing made of synthetic materials), an unbalanced state is being created between the electrical charges in the adjacent crusts. The imbalance of antagonistic electrical charges in the Earth's crust caused by the above mentioned effects will increase due to the following factors: /2

(1) electrons, neutrons and photons emitted by the Sun which bombard the Earth each day without being filtered;

(2) nuclear bomb explosions above and below the ground;

(3) mechanisms capable of emitting alpha, beta and gamma rays;

(4) diverse chemical and electrochemical reactions which take place in the water of the large oceans (a giant electrolytic solution), especially near the coasts where the concentration of the seawater is continually altered by the continuous alluvial influx from the rivers which contain many salts and minerals.

The negative electricity (created by various types of friction) or positive electricity (absorbed from the atmosphere or produced in the oceans or under the ground by nuclear bombs) causes a change in the position and the state between the adjacent portions of the Earth's crust, followed by earthquakes. These differ qualitatively and quantitatively depending on the variation in the amount of electricity. The imbalance of the electricity in the Earth's crust influences the formation of electromagnetic lines around the Earth. All changes in the shape of the electromagnetic lines of the Earth are accompanied by the generation of large cyclones and large tornadoes, changes in the weather caused by the passage of large aircraft, aided by the activity of the Sun.

The Earth's crust, charged with static electricity, resembles a large capacitor charged with electricity. It is clear that capacitors charged with

electricity are capable of influencing the charge on metal objects (discs, plates) which are near them and produce effects corresponding to the development of an electrical influence.

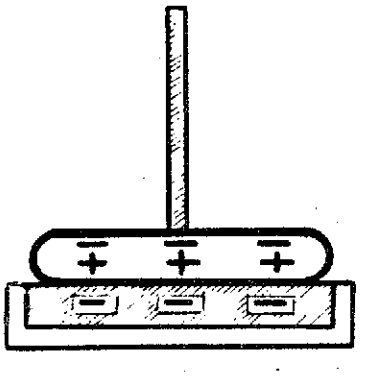

Figure 1. A Volta Electrophorus for Demonstrating the Phenomenon of the Electric Effect.

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The portion of the Earth's crust in which the amount of positive electricity has been increased by the causes mentioned above can change the electrical charge on adjacent portions of the Earth's crust; as a result, large masses of the Earth's crust shift. This displacement is generally accompanied by the development of earthquakes or the occurrence of a volcanic eruption accompanied by lightning, thunder and electromagnetic and geophysical phenomena which are still unknown.

What can be done to combat earthquakes?

We would have an ideal method of dealing with earthquakes if it were possible to measure continuously the change in the quality and quantity of the electrical charge between the individual portions of the Earth's crust at various depths. Unfortunately, we are still unable to do this inasmuch as we lack appropriate technical equipment. In the near future we shall be able to use artificial satellites to measure all of the possible changes in the electromagnetic lines of the magnetic field of the Earth. On the basis of the latter, we will be able to draw precise conclusions regarding the quantitative and qualitative status of the lower strata of the Earth's crust.

It would be easy to use the technical method proposed in this discussion. The method is as follows:

Steel collectors would be installed in the shape of a giant spiderweb to a depth of 2,000 to 10,000 meters. The points of this enormous polygon would be made up of cables which would allow communication between the collectors buried in the Earth and the steel tower which would be 1,500 to 5,000 meters tall. This steel tower would be built at the center of an enormous polygon 25,000 to 30,000 meters in diameter. This polygon would adjust to changes caused by earthquakes. Beneath the tower there would be a cable connected to the tower and running down 3,000 to 5,000 meters deep; it would serve as an inductor to increase the electrical potential (by induction) collected by the subterranean collectors.

Look at Figure 2: It shows the main tower with the subterranean collectors.

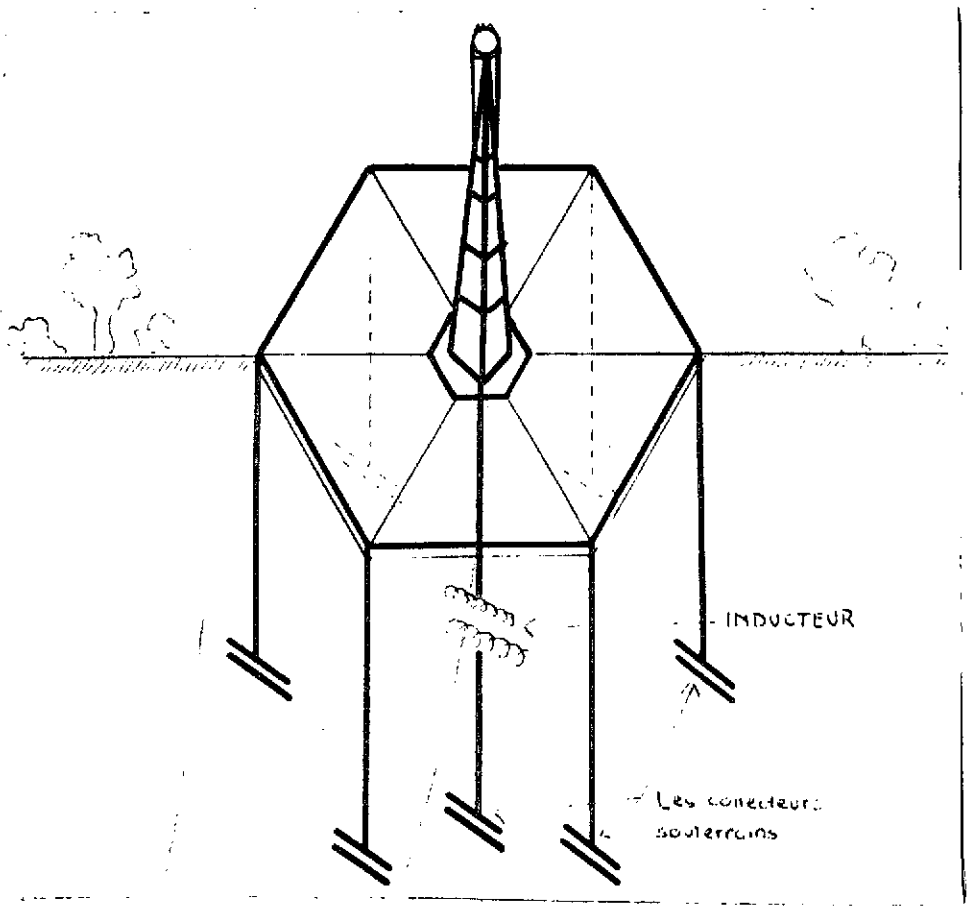

Figure 2. The Main Tower With Its Collectors

A sphere made of aluminum would serve to discharge the electricity collected from the Earth's crust by the subterranean collectors and release it into the ionosphere. Its sphere would be 50 meters in diameter and would be equipped with steel wires on the top that would be made in the form of arrows like a harpoon and covered with a noble metal. These arrows would be 10 meters long (see Figure 3). /4

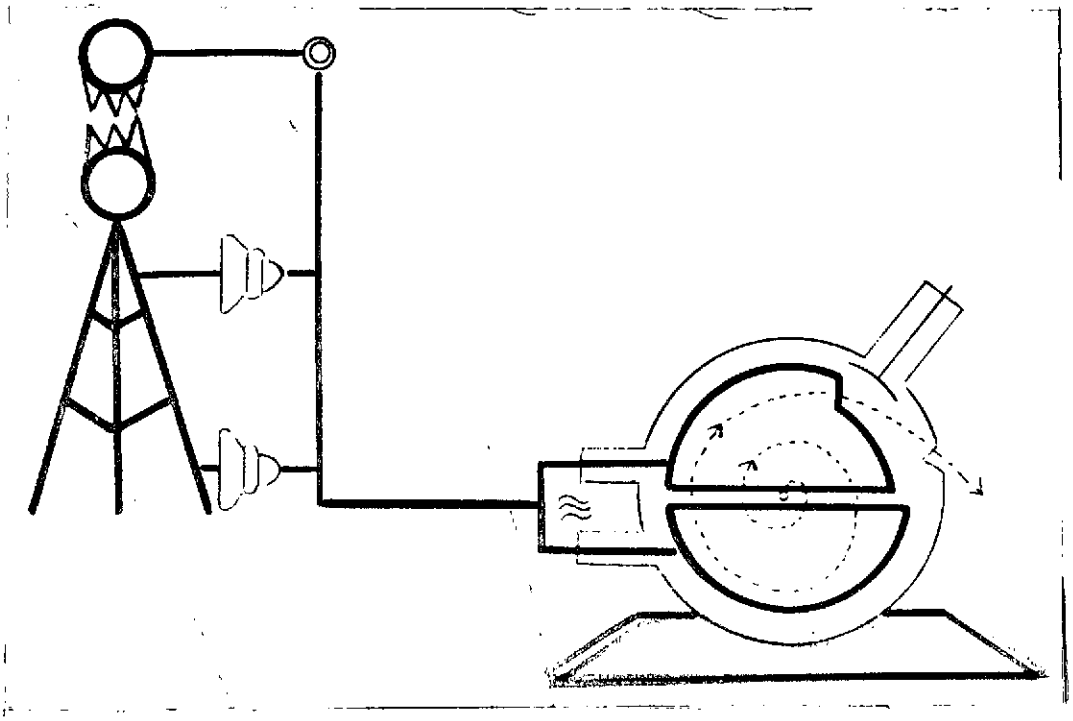

Figure 3. The Top of the Tower with the Aluminum Globes and a Cyclotron Driven by the Electricity from the Earth's Crust.

It might happen that the electricity from the ionosphere above the aluminum globe on the main tower would be similar to the electricity in the Earth's crust collected by the subterranean collectors. In this case, the transfer of the electrical charge accumulated by the aluminum globe into the ionosphere would be impossible. (Similar charges repel each other.) In this case it would be necessary to mount another aluminum sphere of the same size and same shape as the sphere on the tower. The second sphere is elevated on a hard aluminum support which is mounted to the main tower by large insulators. The second sphere carries no electrical charge and therefore is capable (like a giant capacitor) of acting as an acceptor of electricity from the sphere on the main tower by means of induction. In order to assure uninterrupted reception of electricity from the Earth's crust, it would be necessary to provide a possibility for adjusting the distance between these two spheres by means of an automatic control system using the Coulomb principle. The electrical energy collected from the Earth's crust could serve to drive cyclotrons that require several millions of volts.

Figure 3. Detailed drawing of the top of the main tower with aluminum spheres and the diagram of a cyclotron driven by electricity from the Earth's

crust. [This paragraph is separate from the caption provided for the drawing itself . . . . translator's note] .

(B) Causes that could serve to produce volcanic eruptions.

We can assume that the following circumstances play significant roles in causing volcanic eruptions.

In certain areas located far below the Earth's crust, charged with electricity having opposite signs, where there are enormous subterranean cavities filled with gas or oil, the sparks caused by friction in the areas where adjacent blocks meet can cause an explosion of tremendous force, followed by a movement of the Earth having intensity and extent that can vary according to the tectonic state of the Earth's crust; there is also the possibility of a volcanic eruption. These underground explosions are very dangerous and can come even from small sparks. They are very dangerous especially in those caverns where a chemical reaction promotes the production of peroxide radicals.

Modern chemistry has proven that the auto-oxidation of various substrates (including phenols, aldehydes, thio-junctions-derivatives, saturated and unsaturated aliphatic substrates [1-8]) by catalysts form highly diverse derivatives of metal complexes which aid in the formation and multiplication of peroxide radicals in fatty acids.

We can imagine that a tiny spark of static electricity could cause an enormous explosion of gas and oil which occurs deep in the Earth in the presence of oxygen which is liberated from peroxide radicals of fatty acids.

We must still determine the nature of the production of the electrical sparks in the depths of the Earth. Geologists and miners are quite familiar with the fact that large cavities can often be found deep in the Earth which are filled with asphalt, tar, or other types of polycondensates and polymerisates of simple or cyclic carbohydrates. In these subterranean cavities (which contain a great deal of gas or oil) where gas is in contact with the oil and with the walls of the cavities due to a chemical reaction (for example, the polymerization or polycondensation, the action of porphyrin-derivatives from the Earth's crust [9]) there will be a thin layer (tenuous film) which has a polymer structure. /5

In the enormous cavities, the surface of the oceans of oil which are covered with this layer has a structure of a polymer which is never quiet.

This enormous mass, like the oceans, has a flux and reflux position; this is why there always will be a possibility of friction of the polymerized layer against the walls of the underground reservoir holding the gas or oil.

By means of this friction, static electricity is generated having a potential of several millions of volts causing an imbalance in the electrical charge on the Earth's crust.

The situation is more serious in those places where there are cavities filled with gas in the proximity of underground oceans of oil. If these cavities which are separated for some reason should be connected (for example, if a hole develops between two or more underground cavities due to an increase in the pressure in the cavity developed by a change in temperature or by explosions of nuclear bombs or sliding of layers after heavy rains) the oil will begin to run from one cavity into another. As it moves, the oil generates by friction between the surface of the oil and the walls of the cavities that are covered with a tenuous membrane of metallorganic polymers, static electricity which has immense potential and a negative charge. (A form of this static electricity is created when a strip of synthetic material is quickly unrolled from a spool, such as Scotch tape.) The most dangerous situation occurs when the oil that moves from one cavity to another forms cascades. In this case, the oil rubs agains the walls of the cavities, over a tremendous surface and the interior of the cavities becomes covered with a tenuous membrane of metallorganic polymers catalyzed by the porphyrin-catalases of the Earth's crust.

The oil enters the underground cavities separated by waterfalls like water in communicating vessels. The flux and reflux of the oil in these cavities is regulated by astro- and geophysical forces like those that affect the oceans. The formation of underground cavities which communicate through cascades is very easy when natural deposites are being exploited -- petroliferous strata, gas deposits, ...

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Prevention of earthquakes is very important especially in those areas where there are enormous oil or gas resources deep in the Earth.

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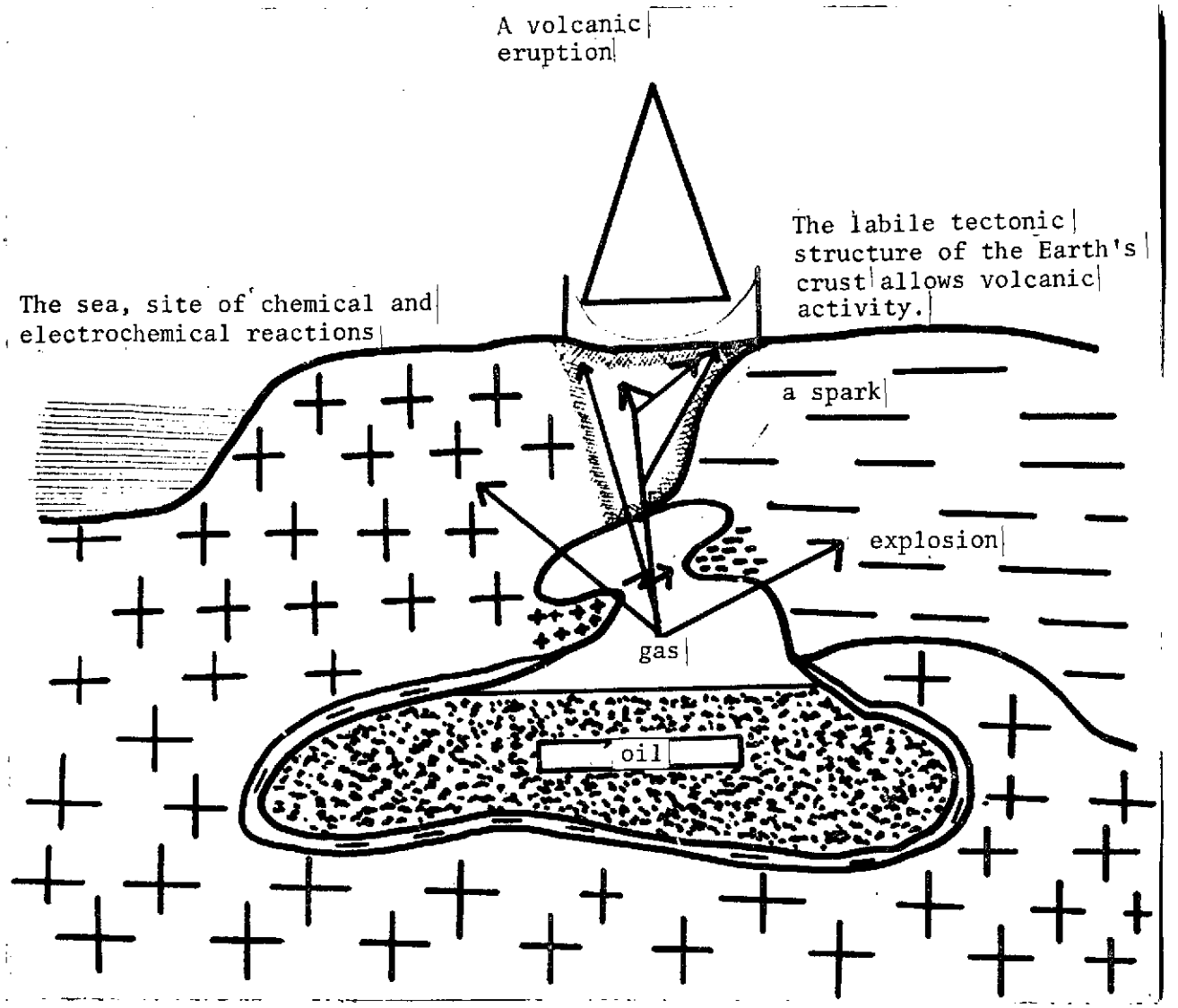

Figure 4. Qualitative and Quantative Imbalance of the Electrical Charge on the Walls of the Cavern Triggers an Electric Spark. The underground explosion of oil or gas caused by the spark causes an earthquake or a sliding of the Earth or even, if the tectonic structure of the Earth's crust allows it, volcanic activity.

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